

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A process for producing an antibody composition using a cell, which comprises using a cell into which a double-stranded RNA comprising an RNA selected from the following (a) or (b) and its complementary RNA is introduced:

(a) an RNA comprising the nucleotide sequence represented by ~~any one of~~ SEQ ID NOs: ~~9 to 30~~11;

(b) an RNA consisting of a nucleotide sequence ~~in which one or several nucleotide(s) is/are deleted, substituted, inserted and/or added in~~ having 80% or more homology to the nucleotide sequence ~~represented by any one of~~ SEQ ID NOs: ~~9 to 30~~11 and having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain.

2. (original): The process according to claim 1, wherein the enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in the complex type N-glycoside-linked sugar chain is α 1,6-fucosyltransferase.

3. (currently amended): The process according to claim 2, wherein the α 1,6-fucosyltransferase is a protein encoded by a DNA selected from the group consisting of the following (a) ~~to and (b)~~ (b):

(a) a DNA comprising the nucleotide sequence ~~represented by~~ of SEQ ID NO: 1; and

(b) ~~a DNA comprising the nucleotide sequence represented by SEQ ID NO:2;~~
(c) ~~a DNA comprising the nucleotide sequence represented by SEQ ID NO:3;~~
(d) ~~a DNA comprising the nucleotide sequence represented by SEQ ID NO:4;~~
(e) ~~a DNA which hybridizes with a DNA consisting of~~ to the nucleotide sequence
that is entirely complementary to ~~represented by~~ SEQ ID NO:1 under stringent conditions and
encodes a protein having α 1,6-fucosyltransferase activity;

(f) ~~a DNA which hybridizes with a DNA consisting of the nucleotide sequence~~
~~represented by SEQ ID NO:2 under stringent conditions and encodes a protein having α 1,6-~~
~~fucosyltransferase activity;~~

(g) ~~a DNA which hybridizes with a DNA consisting of the nucleotide sequence~~
~~represented by SEQ ID NO:3 under stringent conditions and encodes a protein having α 1,6-~~
~~fucosyltransferase activity;~~

(h) ~~a DNA which hybridizes with a DNA consisting of the nucleotide sequence~~
~~represented by SEQ ID NO:4 under stringent conditions and encodes a protein having α 1,6-~~
~~fucosyltransferase activity.~~

4. (currently amended): The process according to claim 2, wherein the α 1,6-fucosyltransferase is a protein selected from the group consisting of the following (a) ~~to~~ and (4b):

(a) a protein comprising the amino acid sequence ~~represented by~~ of SEQ ID NO:5;
and

(b) ~~a protein comprising the amino acid sequence represented by SEQ ID NO:6;~~

(c) ~~a protein comprising the amino acid sequence represented by SEQ ID NO:7;~~

(d) ~~a protein comprising the amino acid sequence represented by SEQ ID NO:8;~~

~~(e) — a protein consisting of an amino acid sequence in which one or more amino acid(s) is/are deleted, substituted, inserted and/or added in the amino acid sequence represented by SEQ ID NO:5 and having α 1,6-fucosyltransferase activity;~~

~~(f) — a protein consisting of an amino acid sequence in which one or more amino acid(s) is/are deleted, substituted, inserted and/or added in the amino acid sequence represented by SEQ ID NO:6 and having α 1,6-fucosyltransferase activity;~~

~~(g) — a protein consisting of an amino acid sequence in which one or more amino acid(s) is/are deleted, substituted, inserted and/or added in the amino acid sequence represented by SEQ ID NO:7 and having α 1,6-fucosyltransferase activity;~~

~~(h) — a protein consisting of an amino acid sequence in which one or more amino acid(s) is/are deleted, substituted, inserted and/or added in the amino acid sequence represented by SEQ ID NO:8 and having α 1,6-fucosyltransferase activity;~~

~~(i) — a protein consisting of an amino acid sequence which has 80% or more homology to the amino acid sequence represented by of SEQ ID NO:5 and having α 1,6-fucosyltransferase activity;~~

~~(j) — a protein consisting of an amino acid sequence which has 80% or more homology to the amino acid sequence represented by SEQ ID NO:6 and having α 1,6-fucosyltransferase activity;~~

~~(k) — a protein consisting of an amino acid sequence which has 80% or more homology to the amino acid sequence represented by SEQ ID NO:7 and having α 1,6-fucosyltransferase activity;~~

~~(1) — a protein consisting of an amino acid sequence which has 80% or more homology to the amino acid sequence represented by SEQ ID NO:8 and having α 1,6-fucosyltransferase activity.~~

5. (previously presented): The process according to claim 1, wherein the cell into which the RNA having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain is introduced is a cell which is resistant to a lectin which recognizes a sugar chain structure in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in an N-glycoside-linked sugar chain.

6. (currently amended): The process according to claim 5, wherein the cell is resistant to ~~at least one lectin selected from the group consisting of the following (a) to (d):~~

- ~~(a) — a *Lens culinaris* lectin;~~
- ~~(b) — a *Pisum sativum* lectin;~~
- ~~(c) — a *Vicia faba* lectin;~~
- ~~(d) — an *Aleuria aurantia* lectin.~~

7. (currently amended): The process according to claim 1, wherein the cell is ~~selected from the group consisting of a yeast cell, an animal cell, an insect cell and a plant cell.~~

8. (currently amended): The process according to claim 1, wherein the cell is a cell ~~selected from the group consisting of the following (a) to (i):~~

- ~~(a) — a CHO cell derived from Chinese hamster ovary tissue;~~
- ~~(b) — a rat myeloma cell line YB2/3HL.P2.G11.16Ag.20 cell;~~
- ~~(c) — a mouse myeloma cell line NS0 cell;~~

- ~~(d) — a mouse myeloma cell line SP2/0-Ag14 cell;~~
- ~~(e) — a BHK cell derived from Syrian hamster kidney tissue;~~
- ~~(f) — an antibody producing hybridoma cell;~~
- ~~(g) — a human leukemia cell line Namalwa cell;~~
- ~~(h) — an embryonic stem cell;~~
- ~~(i) — a fertilized egg cell.~~

9. (previously presented): The process according to claim 1, wherein the cell is a transformant into which a gene encoding an antibody molecule is introduced.

10. (original): The process according to claim 9, wherein the antibody molecule is selected from the group consisting of the following (a) to (d):

- (a) a human antibody;
- (b) a humanized antibody;
- (c) an antibody fragment comprising the Fc region of (a) or (b);
- (d) a fusion protein comprising the Fc region of (a) or (b).

11. (previously presented): The process according to claim 9, wherein the antibody molecule belongs to an IgG class.

12. (currently amended): The process according to claim 1, wherein the antibody composition is an antibody composition having higher antibody-dependent cell-mediated cytotoxic activity than an antibody composition produced by a parent cell into which a double-stranded RNA comprising an RNA selected from the following (a) or (b) and its complementary RNA is not introduced:

- (a) an RNA comprising the nucleotide sequence ~~represented by any one of SEQ ID NOs: 9 to 30~~11;

(b) an RNA consisting of a nucleotide sequence ~~in which one or several nucleotide(s) is/are deleted, substituted, inserted and/or added in~~ having 80% or more homology to the nucleotide sequence represented by any one of SEQ ID NOs:9 to 3011 and having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain.

13. (original): The process according to claim 12, wherein the antibody composition having higher antibody-dependent cell-mediated cytotoxic activity is an antibody composition which comprises antibody molecules having complex type N-glycoside-linked sugar chains in the Fc region, and in which a ratio of sugar chains in which fucose is not bound to N-acetylglucosamine in the reducing end in the sugar chains among the complex type N-glycoside-linked sugar chains is higher than that of an antibody composition produced by the parent cell.

14. (original): The process according to claim 13, wherein the complex type N-glycoside-linked sugar chains are sugar chains in which 1-position of fucose is not bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in the sugar chains.

15. (previously presented): The process according to claim 12, wherein the antibody composition having higher antibody-dependent cell-mediated cytotoxic activity is an antibody composition which comprises antibody molecules having complex type N-glycoside-linked sugar chains in the Fc region, and in which the ratio of sugar chains in which fucose is not bound to N-acetylglucosamine in the reducing end in the sugar chains among the complex type N-glycoside-linked sugar chains is 20% or more.

16. (previously presented): The process according to claim 1, wherein the antibody composition having higher antibody-dependent cell-mediated cytotoxic activity is an antibody

composition which comprises antibody molecules having complex type N-glycoside-linked sugar chains in the Fc region, and in which the complex type N-glycoside-linked sugar chains are sugar chains in which fucose is not bound to N-acetylglucosamine in the reducing end.

17. (withdrawn): A cell into which an RNA capable of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain is introduced, and which is used in the process according to claim 1.

18. (withdrawn): The cell according to claim 17, wherein the enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain is α 1,6-fucosyltransferase.

19. (withdrawn): A cell in which an RNA selected from RNAs of the group consisting of the nucleotide sequences represented by any one of SEQ ID NOs:9 to 30 is introduced or expressed.

20. (withdrawn): A double-stranded RNA consisting of an RNA selected from the following (a) or (b) and its complementary RNA:

(a) an RNA comprising the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30;

(b) an RNA consisting of a nucleotide sequence in which one or several nucleotide(s) is/are deleted, substituted, inserted and/or added in the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30 and having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position

of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain.

21. (withdrawn): A DNA corresponding to the RNA described in claim 20 and a complementary DNA to the DNA.

22. (withdrawn): A recombinant DNA which is obtainable by introducing a DNA corresponding to the RNA described in claim 20 and a complementary DNA to the DNA into a vector.

23. (withdrawn): The recombinant DNA according to claim 22, which expresses the double-stranded RNA consisting of an RNA selected from the following (a) or (b) and its complementary RNA:

(a) an RNA comprising the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30;

(b) an RNA consisting of a nucleotide sequence in which one or several nucleotide(s) is/are deleted, substituted, inserted and/or added in the nucleotide sequence represented by any one of SEQ ID NOs:9 to 30 and having activity of suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain.

24. (withdrawn): A transformant which is obtainable by introducing the recombinant DNA according to claim 22 into a cell.

25. (withdrawn): A method for constructing a cell which is resistant to a lectin which recognizes a sugar chain structure in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked

sugar chain, which comprises introducing or expressing the double-stranded RNA described in claim 20 in a cell.

26. (withdrawn): The method according to claim 25, wherein the cell which is resistant to a lectin which recognizes a sugar chain structure in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain is resistant to at least one lectin selected from the group consisting of the following (a) to (d):

- (a) a *Lens culinaris* lectin;
- (b) a *Pisum sativum* lectin;
- (c) a *Vicia faba* lectin;
- (d) an *Aleuria aurantia* lectin.

27. (withdrawn): A method for suppressing the function of an enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain, which comprises using an RNA selected from RNAs of the group consisting of the nucleotide sequences of any one of SEQ ID NOs:9 to 30.

28. (withdrawn): The method according to claim 27, wherein the enzyme relating to the modification of a sugar chain in which 1-position of fucose is bound to 6-position of N-acetylglucosamine in the reducing end through α -bond in a complex type N-glycoside-linked sugar chain is α 1,6-fucosyltransferase.